

## REMARKS/ARGUMENTS

### Regarding Specification

In the specification, the Cross-Reference to Related Application section has been amended to provide the related U.S. Patent Application Numbers.

### Regarding Drawings

Drawings stand objected because of margin, character lines, and shading informalities as noted in PTOL Form 948. Submitted herewith as separate papers are formal drawings in which all informalities have been corrected.

### Claim Status and Amendment

Claims 14-22, 36-44, 59, 69-70, 73-77 are now pending. Claims 1-13, 23-35, 45-58, 60-68, 71-72 had been canceled as the result of an earlier restriction requirement.

Claims 69-70 have been reinstated for the Examiner's approval, because these claims depend from claim 37. The Applicant respectfully requests claims 69-70 be considered along with the elected claims.

Claims 14-15, 22, 36-37, 41-44, 59, and 70 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The amendment also contains minor changes of a clerical nature. The text of claims 16-21, 38-40, 69, is unchanged, but their meaning is changed because they depend from amended claims. No "new matter" has been added by the amendment.

New claims 73-84 have been added by this amendment and also particularly point out and distinctly claim subject matter regarded as the invention.

Allowable Subject Matter

The Examiner is thanked for his kind finding of allowable subject matter in claims 22 and 41-44 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22 and 41-44 have been amended such that they include all of the limitations of the respective base claims and any intervening claims as suggested by the Examiner. Accordingly, it is respectfully submitted that claims 22 and 41-44 are now in condition for allowance.

The 35 U.S.C. §103 Rejection

Claims 14-21, 36-40 and 59 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Chen et al. (U.S. Pat. No. 4,196,963), among which claims 14-15, 36-37, and 59 are independent claims. This rejection is respectfully traversed.

According to M.P.E.P. §2143,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or

references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Claim 14 defines a method for annealing a lithium niobate substrate. The claimed method comprises heating said lithium niobate substrate in an environment having lithium niobate powder disposed therein, the lithium niobate substrate being separated from the lithium niobate powder by a barrier, the barrier inhibiting movement of the powder thereacross while permitting a free flow of gas within the environment, as recited in claim 14 as amended.

In the Office Action, the Examiner alleges that Chen teaches a method for eliminating  $\text{Li}_2\text{O}$  out-diffusion in  $\text{LiNbO}_3$  and  $\text{LiTaO}_3$  waveguide structure. However, in Chen, the  $\text{LiNbO}_3$  or  $\text{LiTaO}_3$  waveguide structure is directly placed or packed in  $\text{LiNbO}_3$  or  $\text{LiTaO}_3$  powder (column 3, lines 27 and 35, column 4, lines 55-56, column 5, lines 13 and 60-62). Furthermore, Chen suggests desirability of direct contact of the powder with the substrate since it enhances reaction rate by solid-solid surface interaction (column 5, lines 39-41). Thus, not only Chen fails to teach or suggest separating the substrate from the powder by a barrier allowing a free flow of gas within the environment, as recited in claim 14, but also teaches away from any separation of the substrate from its direct contact with the powder.

Accordingly, Chen neither teaches nor suggests the claimed method as recited in claim 14. Claims 15, 36, 37, and 59 also include substantially the same distinctive feature as claim 14.

Therefore, it is respectfully requested that the rejection of claims based on Chen be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

#### Dependent Claims

Claims 16-21 depend from claim 15, and claims 38-40 and 69-70 depend from claim 37, and thus include the limitations of claims 15 and 37, respectively. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

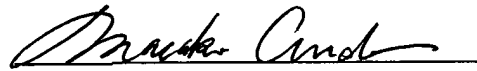
#### Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,  
THELEN REID & PRIEST, LLP

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Limited Recognition under 37 CFR §10.9(b)

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